

# Work Order ID 70658

Friday, June 10, 2011 4:13:23 PM



Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: *CMF*

Date: *11-06-10*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3391	Rev H/ DEO

100		0.00
-----	--	------



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio FA599

Rev: *AA* & Dwg D3391 Rev: *H*

\*\*\*scribe batch # on fwd end at 90 degree\*\*\*

*MM.L 11/06/16*

110		0.00
-----	--	------



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

*CMF 11/06/16*

111		0.00
-----	--	------



QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

*11-6-12*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 70658**

Friday, June 10, 2011 4:13:23 PM



Page 2

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1  Memo 1-Machine as per Folio FA 599 Rev: <u>AA</u> & Dwg D3391 Rev: <u>H</u> 2-Deburr	0.00  0.00		B.A 11/06/20		1	0		
130  QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo	0.00  0.00		B.A 11/06/20		1	0		
140  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00		amb 11/06/22		1	0		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 70658**

Friday, June 10, 2011 4:13:23 PM

Page 3

Item ID: D3391-025

Accept

Setup Start

Revision ID:

Stop

Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00

Required Date: 6/30/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150



Skidtubes

Skidtubes

0.00

Memo

0.00

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

160



CNC Bend 1

BENDING MACHINE - SKIDTUBES

0.00

Memo

0.00

Form as per Dwg D3391 Using Bend Prog 3391025

CNC Delta 100 Bender

H-4.33

170



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

11-6-22

1 0 BE 11/06/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
		11-2-11						

NOTE: Date & initial all entries

**Work Order ID: 70658**

Friday, June 10, 2011 4:13:23 PM



Page 4

**Item ID:** D3391-025.**Accept****Setup Start****Revision ID:****Stop****Item Name:** Aft Tube Assembly**Start Date:** 6/10/2011 **Start Qty:** 1.00**Cust Item ID:****Required Date:** 6/30/2011 **Req'd Qty:** 1.00**Customer:****Reference:****Approvals:****Process Plan:****Date:****Tooling:****Date:****Run Start****QC:****Date:****SPC (Y/N):****Date:****Stop****Sequence ID/  
Work Center ID****Operation  
Description****Set Up/  
Run Hours****Tool ID****Tool #****Plan  
Code****Accept  
Qty****Reject  
Qty****Reject  
Number****Insp.  
Stamp**

180



Skidtubes

Skidtubes

Skidtubes

0.00

0.00

**Memo**

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217  
Wearplate Jig.

\*\*\*\*\*Do Not Open To Finished Size\*\*\*\*\*

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2  
previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe, wearplate to 0.297"and float bag holes to 0.328" as per  
Dwg D3391.

7-Deburr

11-6-22

BB 11/06/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**Work Order ID 70658**

Friday, June 10, 2011 4:13:23 PM



Page 5

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

*8 u/04/23*

Memo

200



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

0.00

Memo

*xl**Dh*  
*u/04/23*

210



QC

Quality Control

QC3- Inspect Part Finish

0.00

0.00

Memo

*f* *0* *BE u/06/23*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng./ Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			






**NOTE:** Date & initial all entries



**Work Order ID 70658**







Friday, June 10, 2011 4:13:23 PM



Page 6

Item ID: D3391-025 Accept  Setup Start   
Revision ID: Stop   
Item Name: Aft Tube Assembly  
Start Date: 6/10/2011 Start Qty: 1.00  Cust Item ID:  
Required Date: 6/30/2011 Req'd Qty: 1.00  Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start   
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220  Skidtubes	Skidtubes	0.00							
	<b>Memo</b> Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: <u>M116945</u> exp. date <u>12/01/15</u> cure time 12hrs as per QSI0015	0.00							 11/06/23
230  QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	<b>Memo</b>	0.00							
235  HandFinish	Pressure Wash per QSI005 4.3	0.00							
Hand Finishing	<b>Memo</b> AND REALODINE AS PER PAR09-043	0.00							 11/06/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 70658**

Friday, June 10, 2011 4:13:23 PM



Page 7

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

0.00

0.00

0.00

1X 6/10/2011

250

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

0.00

1 6/10/2011

260

HandFinishing

0.00



HandFinish

Hand Finishing

Memo

1-Install inserts as per Dwg D3391

2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291 11/17/5/6

Sikaflex expiry date: 15-01

0.00

1 6/10/2011

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 70658**

Friday, June 10, 2011 4:13:23 PM



Page 8

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/30/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run

Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

270

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8 uloc/29

Quality Control

280

Identify as per dwg & Stock Location: w/o

0.00 2412-742-043 / 1370623



Packaging

Memo

0.00

1 0 2412-742-043

Packaging

290

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

11/6/30

Quality Control

ME 11-06-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Friday, June 10, 2011 4:13:20 PM

Page 1

Work Order ID: 70658



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC  
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM □□□□  
 IPP rev D 07.03.20 revF dwg EC  
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD  
 IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC  
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6014-090  ALUMINUM EXTRUSION		Manufactured	No			100	Each	3.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				3					
					56572			3					
D3670-4-200  SPACER		Manufactured	No			230	Each	31.0000	4	4			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				31					
					68950			31					
D2646  Aft Cap		Manufactured	No			270	Each	24.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP006				23					
					62678			23					
				FP-4				1					
					69019			1					

man.l 11/06/16  
 Sh  
 11/06/23

4  
 11/06/28

11

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Friday, June 10, 2011 4:13:20 PM

Page 2

Work Order ID: 70658

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

270

Each

51.0000

1

1



Wearpad



xl 11/06/28

Location

Loc Qty

Loc Code

FP017

51

69817

51

1369278

xl

D3537-7

Manufactured No

270

Each

1.0000

1

1



Wearpad



xl 11/06/28

Location

Loc Qty

Loc Code

FP017

1

65146

1

1369320

xl

D3553-1

Manufactured No

270

Each

13.0000

1

1



Gasket



xl 11/06/28

Location

Loc Qty

Loc Code

FP013

13

56568

13

xl

D3553-3

Manufactured No

270

Each

37.0000

1

1



Gasket



xl 11/06/28

Location

Loc Qty

Loc Code

FP

20

31631

20

FP013

17

53480

17

xl

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Friday, June 10, 2011 4:13:20 PM

Work Order ID: 70658



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No

270 Each

1,176.000 2 2



Phenolic Washer



JL 6/10/2011

LocationLoc QtyLoc Code

ST074

1150

64177

650

x2

66821

500

ST077

26

52505

26

ALS4-1032-130 Purchased No

260 Each

1,634.000 14 14



Insert



JL 6/10/2011

LocationLoc QtyLoc Code

ST281

8

117331

8

ST282

1626

117717

1626

x12

ALS4-1032-225 Purchased No

270 Each

1,239.000 12 12



Insert



JL 6/10/2011

LocationLoc QtyLoc Code

ST282

1239

110768

439

117717

800

x12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Friday, June 10, 2011 4:13:21 PM

Work Order ID: 70658

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/30/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No

270

Each

1,929.000

6

6



BOLT



ul 4106128

Location

Loc Qty

Loc Code

ST350

1929

117094

427

1118112

86

117313

2

117688

800

117795

500

117872

200

AN3C5A Purchased No

270

Each

1,761.000

4

4



Bolt



ul 4106128

Location

Loc Qty

Loc Code

FP-A

7

115835

7

ST350

1754

116419

100

116549

54

117343

500

117508

300

117764

300

117872

500

84

AN960C10L ~~NAS1149C0332~~ Purchased No

270

Each

0.0000

10

10



washer

1117887



(x10) ul 4106128

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	70658
<b>Description:</b> Float Skidtube (412)		<b>Part Number:</b>	D3391-3
<b>Inspection Dwg:</b> D3391	<b>Rev:</b> H	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
<b>Lathe Section</b>						
14.000	+/-0.010	14.000	✓		tape	mm.l-02
3.500	+/-0.010	3.501	✓		vern	JF-01
88.93	+/-0.030	88.93	✓		tape	mm.l-02
44.995	+/-0.030	44.995	✓		tape	mm.l-02
Ø3.200	+/-0.010	3.200	✓		mic	CNC-05
88.93	+/-0.030	88.93	✓		tape	mm.l-02
Ø3.750	+/-0.010	3.750	✓		mic	CNC-05
30° x 160° c60 chamfer	+/-0.010	30° X.060	✓		"	"

**Measured by:** *gmm.l 1-ml*

**Date:** 11/06/16

**Audited by:** *Re*

**Date:** 11.6.16

<b>HAAS Section</b>						
1.526	+0.000/-0.030	1.510	✓		Vern	GA-01
7.500	+/-0.010	7.500	✓		Vern	CNC-02
27.750	+/-0.010	27.750	✓		Tape	GA-12
31.750	+/-0.010	31.750	✓		"	"
35.250	+/-0.010	35.250	✓		"	"
3.300	+/-0.010	3.296	✓		Vern	GA-01
0.200	+/-0.010	0.201	✓		"	"
3.520	+/-0.010	3.519	✓		Mic	GA-10
0.687	+0.010/-0.000	0.690	✓		Vern	GA-01
R0.062	+/-0.010	R0.063	✓		R-G	ref.
Ø0.484	+0.005/-0.001	Ø0.488	✓		Vern	GA-01

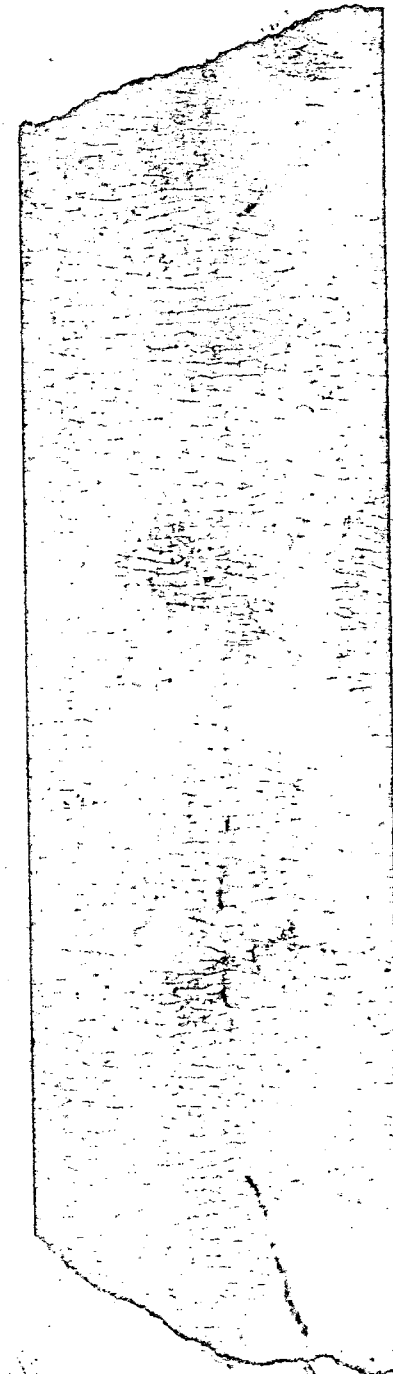
**Measured by:** *B.A.*

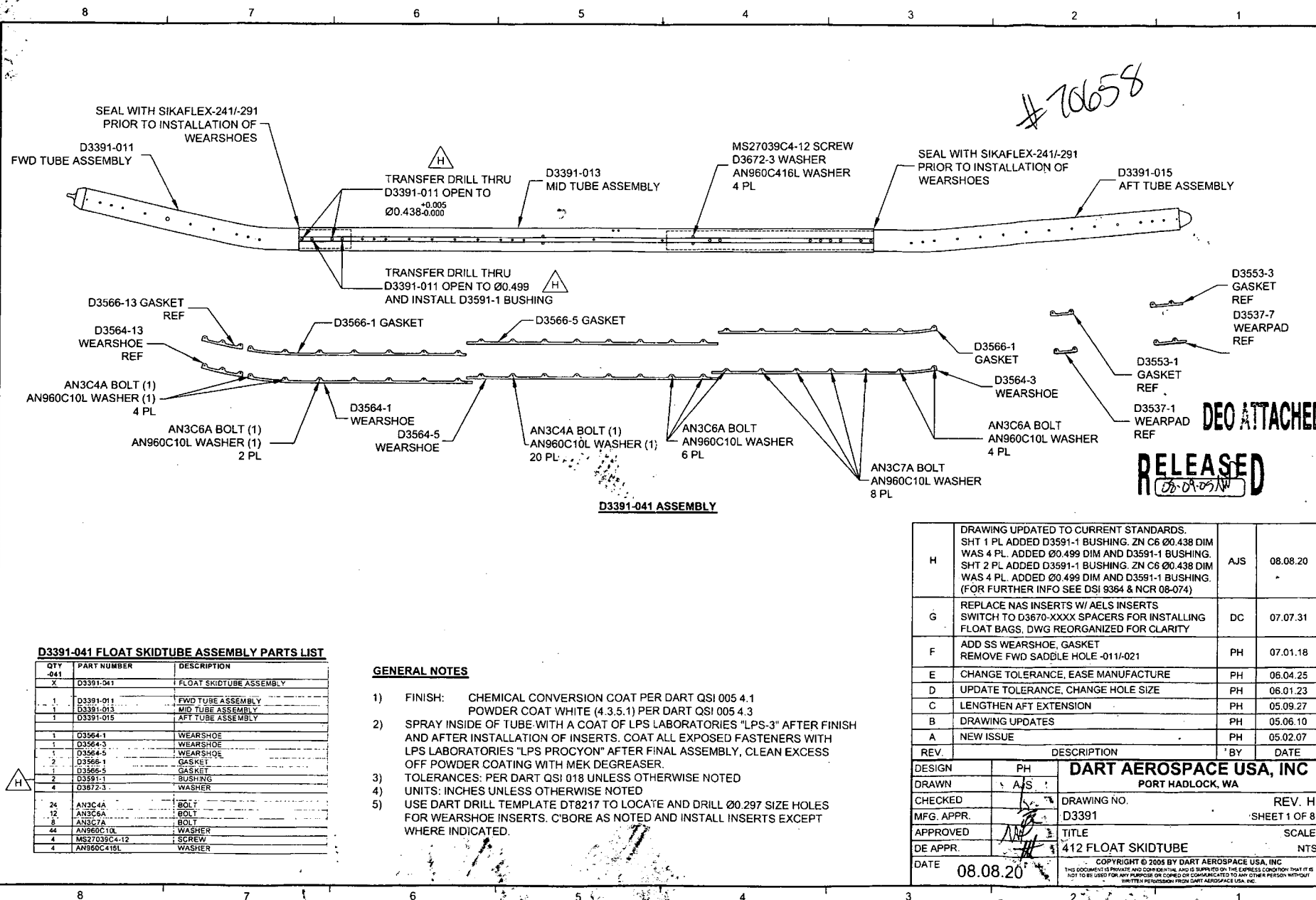
**Date:** 11/06/20

**Audited by:** *anz*

**Date:** 11/06/22

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	<i>AA</i>





**D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

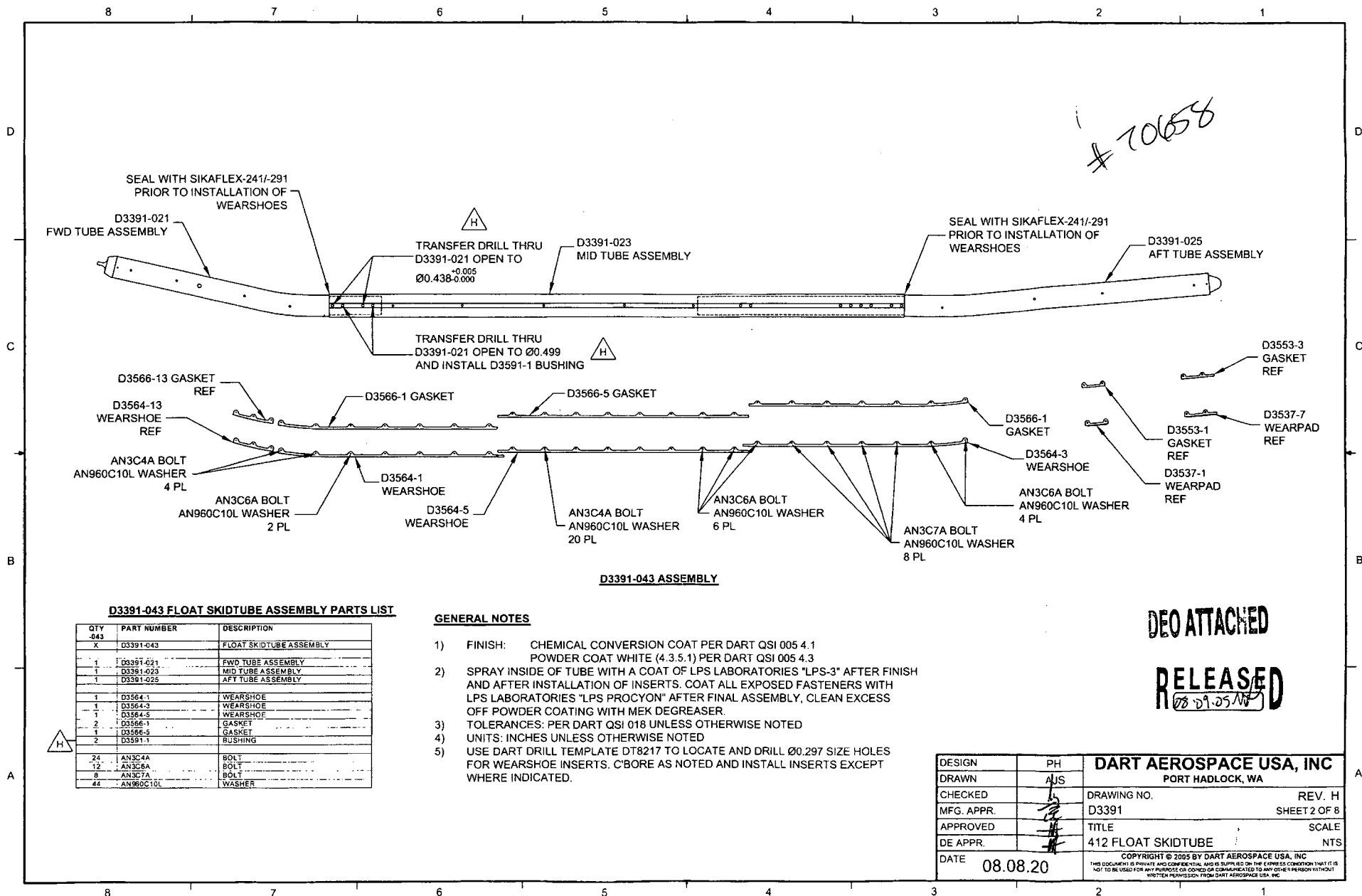
QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

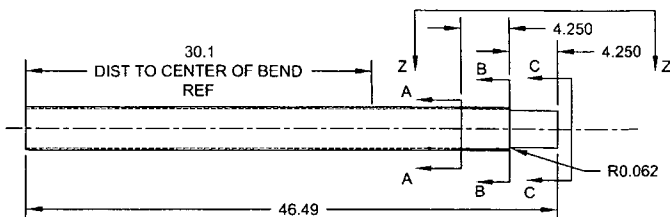
**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH  
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH  
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS  
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES  
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT  
WHERE INDICATED.

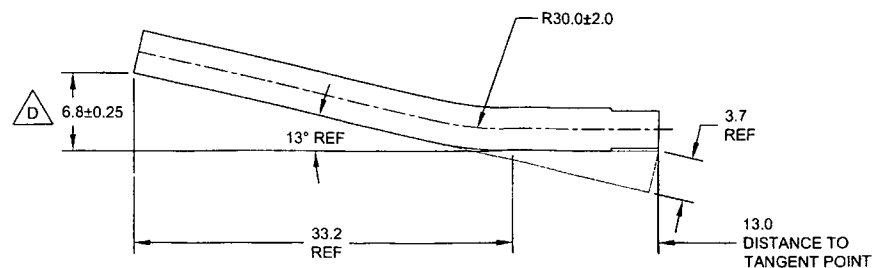
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9384 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	<b>DART AEROSPACE USA, INC</b> PORT HADLOCK, WA	
DRAWN	AJS	DRAWING NO.	REV. H
CHECKED		D3391	SHEET 1 OF 8
MFG. APPR.		TITLE	SCALE
APPROVED		412 FLOAT SKIDTUBE	NTS
DE APPR.		COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
DATE	08.08.20		

#70658

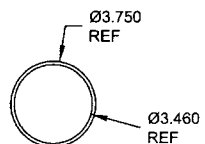




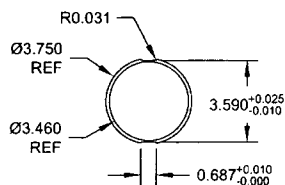
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



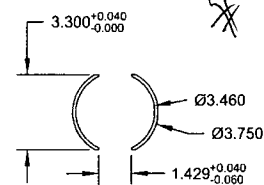
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)



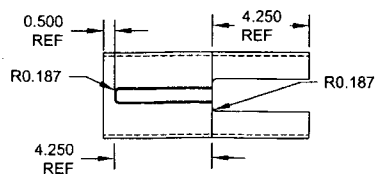
**SECTION A-A**  
SCALE 2X



**SECTION B-B**  
SCALE 2X



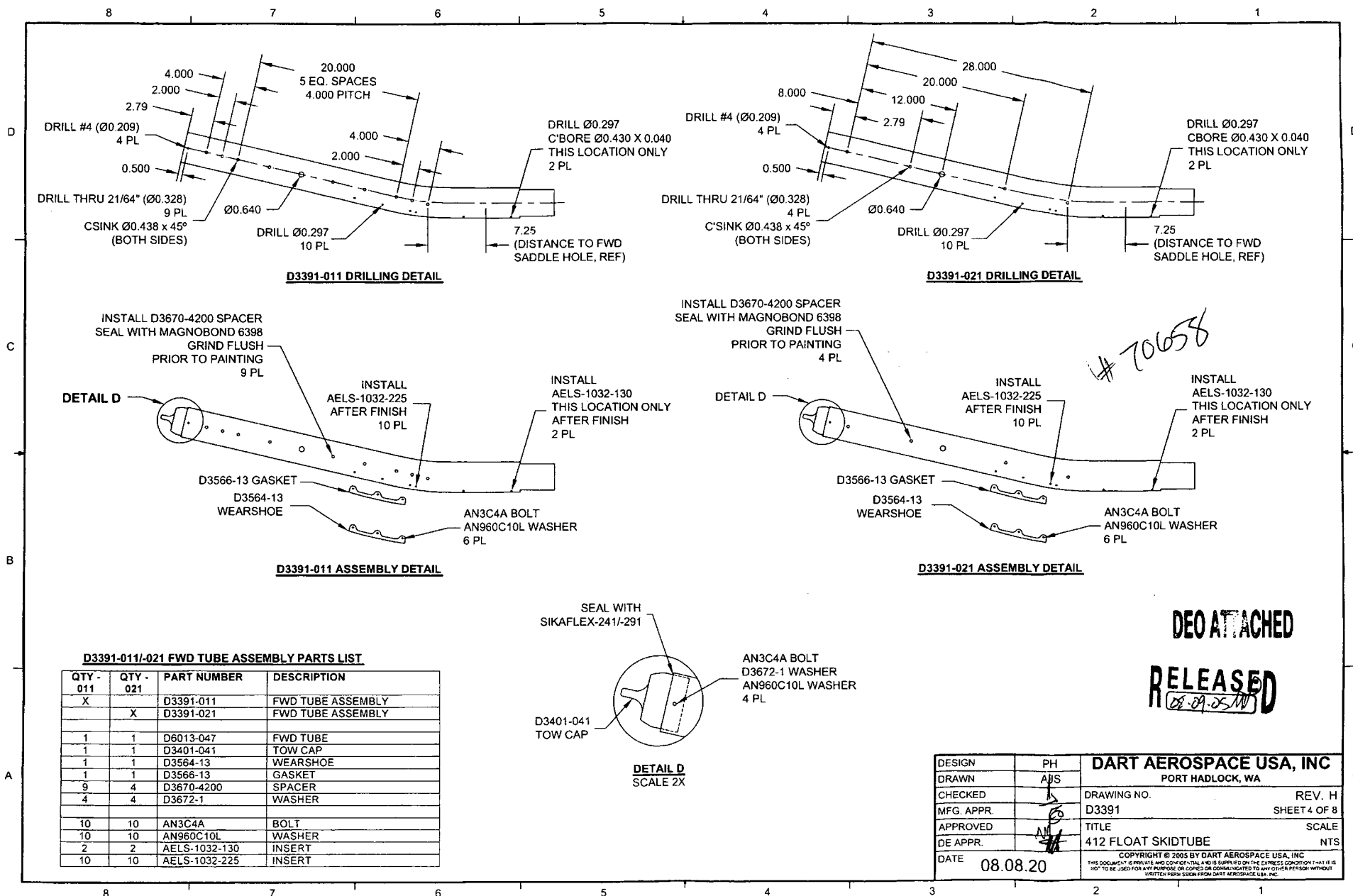
**SECTION C-C**  
SCALE 2X

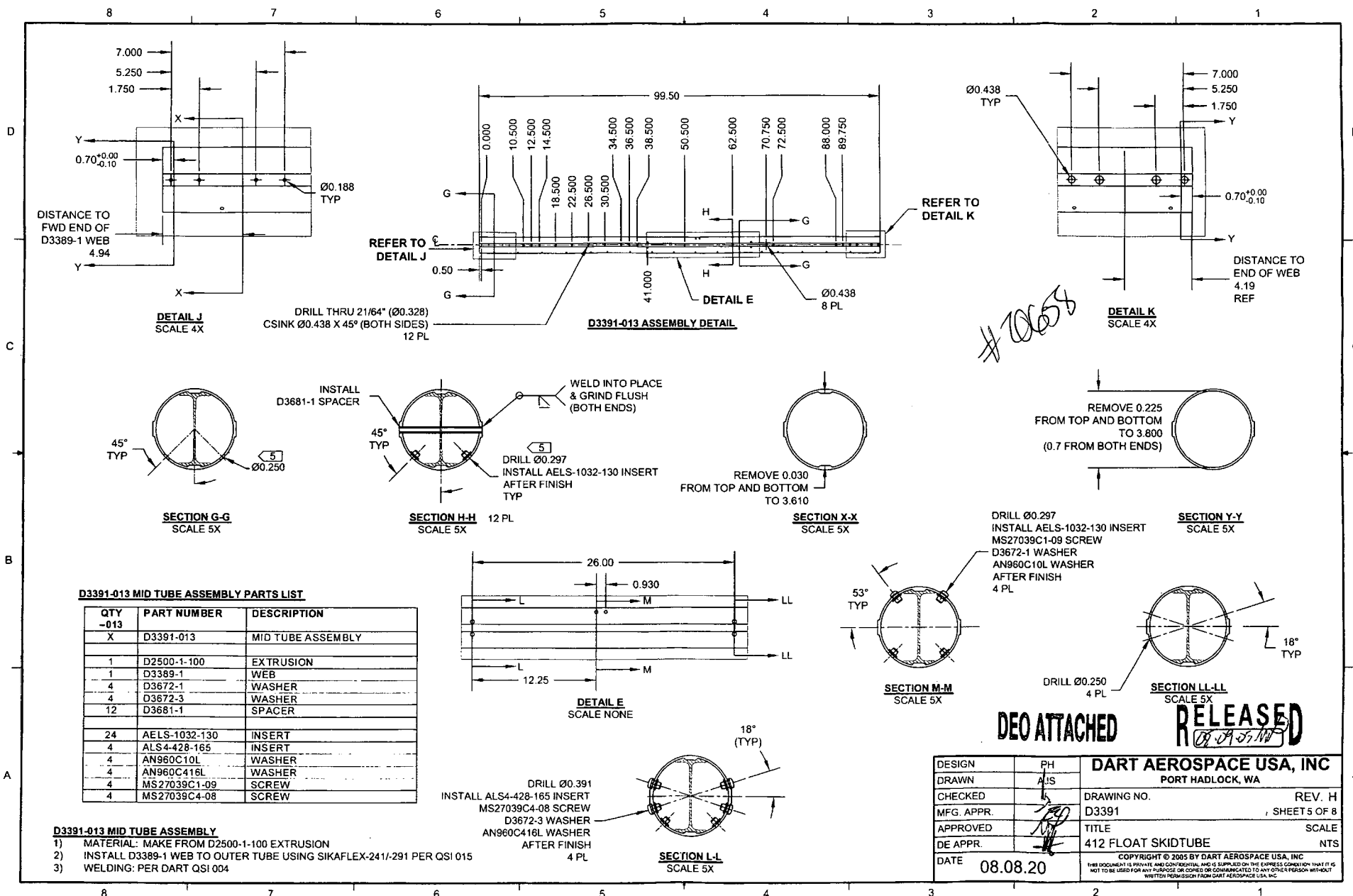


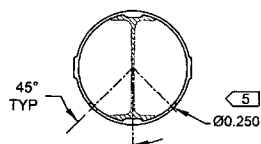
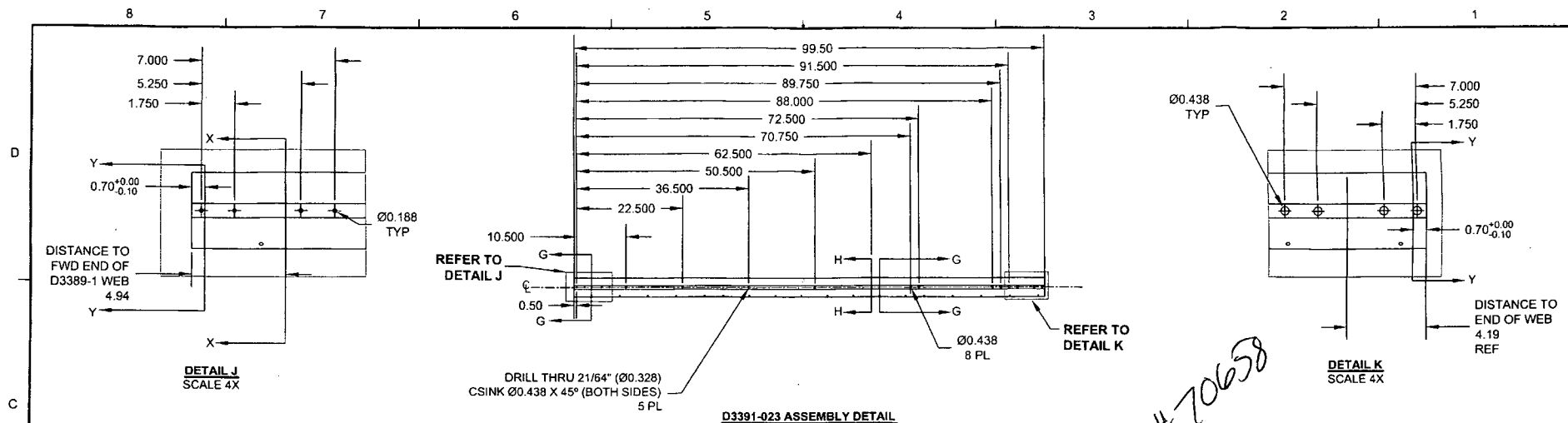
**VIEW Z-Z**  
SCALE 2X

DEO ATTACHED  
RELEASED  
08-05-11

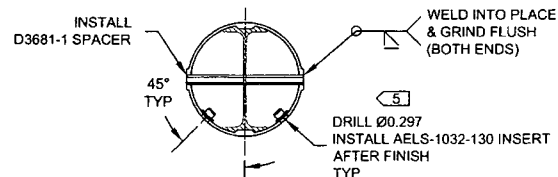
DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 3 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC</small>	



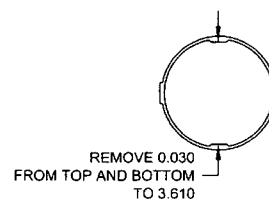




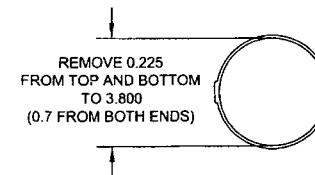
SECTION G-G  
SCALE 5X



SECTION H-H  
SCALE 5X



SECTION X-X  
SCALE 5X



SECTION Y-Y  
SCALE 5X

**D3391-023 MID TUBE ASSEMBLY PARTS LIST**

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

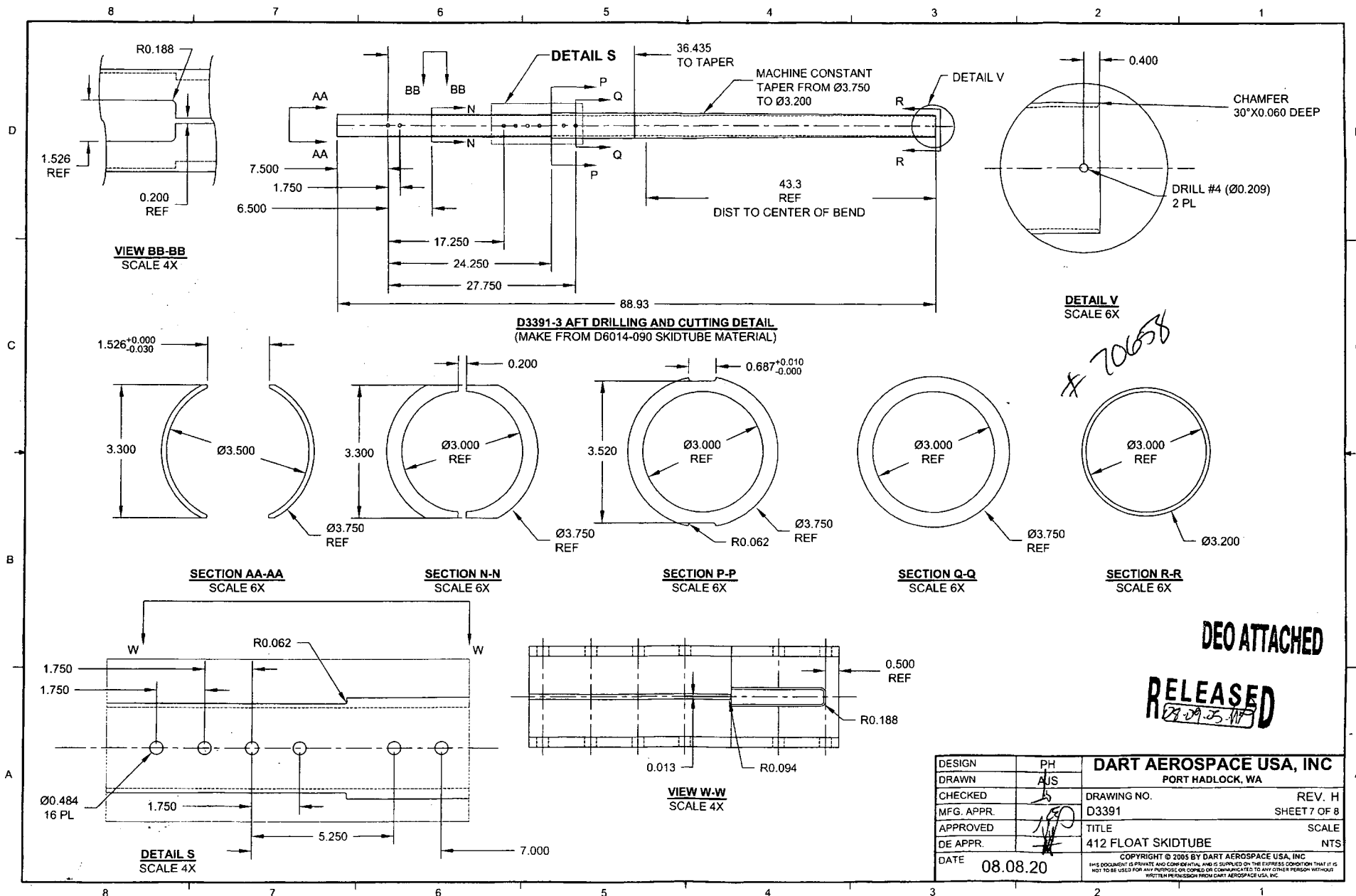
**D3391-023 MID TUBE ASSEMBLY**

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

DEO ATTACHED  
**RELEASED**  
08-09-05-14







DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>h</i>	MFG. APPR. <i>AS</i>	APPROVED <i>MP</i>		DE APPR. <i>h</i>		
DATE 09.09.23	DATE 04.04.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

**PURPOSE:**

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

**CHANGE:**

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~  
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~  
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS  
 OFF POWDER COATING WITH MEK DEGREASER.

**RELEASED**  
 2010-02-02

*MP*

*#70658*

COPYRIGHT © 2009 BY DART AEROSPACE USA, INC

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  
 NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT  
 WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

